

Amendments to the Claims

1. – 4. (Canceled)

5. (Currently Amended) The bacterial reverse transcriptase of claim [1] 7 comprising an amino acid sequence selected from the group consisting of SEQ ID NO.: 32, SEQ ID NO.: 33, SEQ ID NO.: 34, SEQ ID NO.: 35, SEQ ID NO.: 37, and SEQ ID NO.: 38.

6. (Canceled)

7. (Previously Presented) An isolated and purified bacterial reverse transcriptase (RT) which synthesizes msDNA and which is essential for the synthesis of msDNA *in vivo*, said RT comprises a sequence of amino acid residues as follows: Tyr- Xaa₆-Asp-Asp of SEQ ID NO.: 50, wherein Xaa₆ is alanine or cysteine, wherein said sequence is located in subdomain 5 shown in Fig. 14 at positions 175-191 of SEQ ID NO: 32, at positions 175-191 of SEQ ID NO: 33, at positions 175-191 of SEQ ID NO: 34, at positions 168-184 of SEQ ID NO: 35, at positions 159-175 of SEQ ID NO: 36, at positions 171-187 of SEQ ID NO: 37, and at positions 157-173 of SEQ ID NO: 38, and further comprising the 61 amino acid residues as indicated by black dots in the consensus sequence shown in Figure 14 , wherein h is a hydrophobic residue and p is a small polar residue.

8. – 18. (Canceled)